

## Refine Search

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Term	Documents
SERVER\$	0
SERVER	54809
SERVERA	13
SERVERABILITY	1
SERVERABLE	11
SERVERABLY	2
SERVERACCEPT	1
SERVERACCESS	1
"SERVERACCESS.JAVA"	1
"SERVERACCESS.SUB"	1
SERVERACCORDING	1
(L3 AND (SERVER\$ WITH TRANSMIT\$ WITH APPLET\$ WITH DOCUMENT\$)).USPT.	10

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### Search History

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*DB=USPT; PLUR=YES; OP=ADJ*

<u>L6</u>	L3 and (server\$ with transmit\$ with applet\$ with document\$)	10	<u>L6</u>
<u>L5</u>	L2 and (server\$ with transmit\$ with applet\$ with document\$)	0	<u>L5</u>
<u>L4</u>	L3 and (server\$ with receive\$ with document\$ with (output adj1 device\$) with select\$)	0	<u>L4</u>
<u>L3</u>	L2 or 709/\$.ccls.	29022	<u>L3</u>
<u>L2</u>	((mobil\$ adj1 telephone\$) or cellular\$).ab.	11478	<u>L2</u>
<u>L1</u>	((mobil\$ adj1 telephone\$) or cellular\$).ab.	11478	<u>L1</u>

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L6: Entry 1 of 10

File: USPT

Jul 6, 2004

DOCUMENT-IDENTIFIER: US 6760745 B1  
TITLE: Web server replicated mini-filter

Brief Summary Text (18):

In variations of this aspect of the invention, the server caches the replicated document before or after sending a copy to the other client computer. Additionally, the server may add applets to the replicated document to assist in the operation of the interactive session and transmit the applet-endowed document back to the client to replace the version of the document on the client computer without the applets.

Current US Original Classification (1):

709/203

Current US Cross Reference Classification (1):

709/217

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US006760745B1

(12) United States Patent  
Tan et al.(10) Patent No.: US 6,760,745 B1  
(45) Date of Patent: Jul. 6, 2004

## (54) WEB SERVER REPLICATED MINI-FILTER

(75) Inventors: Robert Tan, Los Altos, CA (US); Senthil Sundararajan, Sunnyvale, CA (US); Prabhu Ram Mohan, San Jose, CA (US)

(73) Assignee: Aspect Communications Corporation, San Jose, CA (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/572,016

(22) Filed: May 16, 2000

## Related U.S. Application Data

(60) Provisional application No. 60/193,176, filed on Mar. 30, 2000.

(51) Int. Cl.<sup>7</sup> G06F 15/16

(52) U.S. Cl. 709/203; 709/217; 715/513

(58) Field of Search 709/203, 217, 709/225, 226, 229, 246; 718/105; 715/513

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6,185,598 B1	• 2/2001	Farber et al. ....	709/200
6,226,642 B1	• 5/2001	Beraneck et al. ....	707/120
6,385,642 B1	• 5/2002	Chlan et al. ....	709/203
6,397,259 B1	• 5/2002	Lincke et al. ....	709/236
6,415,335 B1	• 7/2002	Lowery et al. ....	710/5

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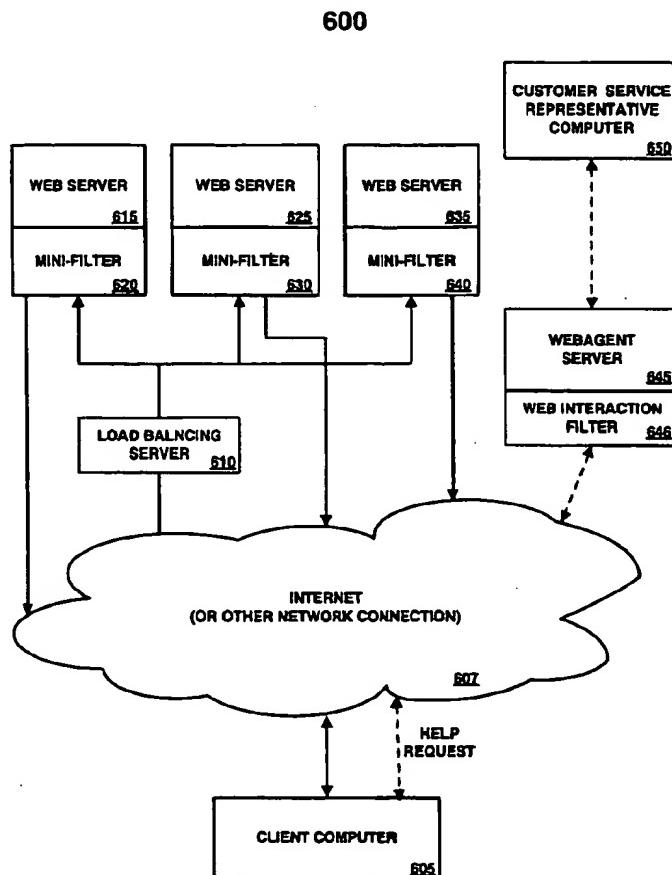
Primary Examiner—Mehmet B. Geckil

(74) Attorney, Agent, or Firm—Blakely Sokoloff Taylor &amp; Zafman LLP

## (57) ABSTRACT

A method of operating a server includes retrieving a document from a storage device. A variable is generated, the variable including information to enable another server to reproduce the document. The variable may, for example, be a compressed and encrypted complete copy of the document, or may be a JavaScript variable. The variable is appended to the document, and the document is transmitted.

29 Claims, 11 Drawing Sheets



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L6: Entry 2 of 10

File: USPT

Jun 1, 2004

DOCUMENT-IDENTIFIER: US 6745229 B1

TITLE: Web based integrated customer interface for invoice reporting

Current US Original Classification (1):

709/206

CLAIMS:

20. An on-line invoicing system supporting user access of electronic invoices for telecommunication services, the system comprising: a secure server configured to support secure communication channel over a packet switched network, wherein the secure server stores a presentation applet that is downloadable for viewing an invoice document by a client application; and an invoice server configured to receive a request message from the client application requesting information of an invoice document, the invoice server accessing a database that stores a billing information collected from a plurality of billing systems associated with the telecommunication services and generating a response message containing the information corresponding to the requested invoice document, the response message being transmitted to the client application over the secure communication channel, wherein the client application downloads the presentation applet from the secure server and launches the presentation applet to view the requested invoice document.

21. A server for supporting on-line invoicing and providing user access of electronic invoices for telecommunication services, the server comprising: an interface configured to support secure communication channel over a packet switched network; and a memory configured to store a presentation applet that is downloadable for viewing an invoice document by a client application over the secure communication channel, wherein the client application transmits a request message to an invoice server requesting information of an invoice document, the invoice server accessing a database that stores a billing information collected from a plurality of billing systems associated with the telecommunication services and generating a response message containing the information corresponding to the requested invoice document, the response message being transmitted to the client application over the secure communication channel, wherein the client application downloads the presentation applet stored in the memory and launches the presentation applet to view the requested invoice document.

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US006745229B1

(12) **United States Patent**  
Gobin et al.

(10) Patent No.: **US 6,745,229 B1**  
(45) Date of Patent: **Jun. 1, 2004**

(54) **WEB BASED INTEGRATED CUSTOMER INTERFACE FOR INVOICE REPORTING**

5,136,707 A 8/1992 Block et al.  
5,208,908 A 5/1993 Harrison et al.

(75) Inventors: **Parmeshwar Gobin, Bronx, NY (US); Henry Huntington Hall, Danbury, CT (US); Carla Reale Hauryluck, Rye Brook, NY (US); Daniel Robert Kanze, New Fairfield, CT (US); Steven William Liburd, Mt. Vernon, NY (US); Kirk Van Sandt, Peyton, CO (US); Jia Huei Swei, Briarcliff Manor, NY (US)**

(73) Assignee: **WorldCom, Inc., Clinton, MS (US)**

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/159,405**

(22) Filed: **Sep. 24, 1998**

**Related U.S. Application Data**

- (60) Provisional application No. 60/060,655, filed on Sep. 26, 1997.  
 (51) Int. Cl.<sup>7</sup> ..... **G06F 15/16**  
 (52) U.S. Cl. ..... **709/206; 705/40**  
 (58) Field of Search ..... **709/218, 223, 709/206, 224; 705/29, 30, 34, 40; 379/201, 265, 112**

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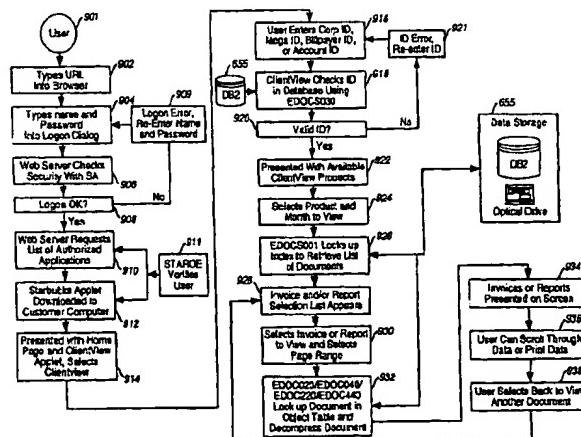
Biggs, M., "Help for the Web enhances customer support, reduces help desk load" *Infoworld*, Jun. 16, 1997, v. 19. No. 24, pp. 82+.

(List continued on next page.)

Primary Examiner—Bunjob Jaroenchonwanit

**(57) ABSTRACT**

A Web-based invoice viewing system and method for enabling a customer to generate invoices relating to various network services provided to the customer by an enterprise. A Web enabled invoice viewing system provides billing and invoice information to remote customers having a workstation with a Web browser and an Internet access. A graphical user interface system at the customer workstation presents a list of invoice documents organized into products and date ranges applicable to the customer for the customer to select and view. Various displays presented at the customer workstation may be printed, faxed, or queued for batch printing at the enterprise remotely. The customer is enabled to view dynamically summed results of numerical figures displayed on the invoice documents by highlighting the numbers in the document directly on the display.

**22 Claims, 17 Drawing Sheets**

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L6: Entry 3 of 10

File: USPT

Feb 24, 2004

DOCUMENT-IDENTIFIER: US 6697848 B2

TITLE: Method and apparatus for enabling application programs to communicate with network clients and servers

Detailed Description Text (36):

When the user wishes to place an order for the item, the user selects button 590. The application program transmits the user's selection of button 590 to the document server, and in response, the document server has an associated code server download Java Language applets to the application program. After the applets have been downloaded, the application program executes the applets. These applets contain object stubs, ORB specific code including the particular network protocol of the on-line ordering system, a network name of the on-line ordering system, etc. The application program then connects to the on-line ordering system, and upon connection therewith, invokes an object within the online ordering system. Typically the on-line ordering system returns an acknowledgement signal which is passed back to the application program.

Detailed Description Text (60):

When the user wishes to place an order for a stock at a certain price, the user selects button 1340. The server application transmits the users selection of button 1340 to the document server, and in response, the document server has an associated code server download Java language applets to the application program. After the applets have been downloaded, the application program executes the applets. These applets contain object skeletons, ORB specific code including the particular network protocol of the brokerage trading system, etc. In response to a trade command, for example, the application program creates an "trade" object. The user may then exit the web browser. Later, when the trade has executed, the brokerage trading system calls up the user's machine and invokes a method on the "trade" object in the application program to notify the user that the trade is complete.

Current US Original Classification (1):

709/219

Current US Cross Reference Classification (1):

709/230

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US006697848B2

(12) **United States Patent**  
Hamilton et al.

(10) Patent No.: **US 6,697,848 B2**  
(45) Date of Patent: **\*Feb. 24, 2004**

(54) **METHOD AND APPARATUS FOR ENABLING APPLICATION PROGRAMS TO COMMUNICATE WITH NETWORK CLIENTS AND SERVERS**

(75) Inventors: **Graham Hamilton**, Palo Alto, CA (US); **Peter B. Kessler**, Palo Alto, CA (US); **Jeffrey Donald Nisewanger**, San Jose, CA (US); **Sami Shalo**, San Francisco, CA (US); **Jacob Y. Levy**, Los Altos, CA (US); **Steven Robert Kleiman**, Los Altos, CA (US)

(73) Assignee: **Sun Microsystems, Inc.**, Palo Alto, CA (US)

(\*) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **09/395,920**

(22) Filed: **Sep. 14, 1999**

(65) **Prior Publication Data**

US 2003/0065750 A1 Apr. 3, 2003

**Related U.S. Application Data**

(63) Continuation of application No. 08/543,674, filed on Oct. 16, 1995, now Pat. No. 6,009,464.

(60) Provisional application No. 60/004,057, filed on Sep. 20, 1995.

(51) Int. Cl.<sup>7</sup> ..... **G06F 15/16**

(52) U.S. Cl. ..... **709/219; 709/230**

(58) Field of Search ..... **709/220, 221, 709/222, 229, 219, 230; 704/235**

(56)

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T. Berners-Lee et al., RFC 1738: Uniform Resource Locators (URL), Network Working Group, Dec. 1994.\*

Ken North, Understanding OLE, DBMS Online, www.db-smag.com, Jun. 1995, 11 pages.\*

Don Anderson, Helper Applications for the Web, www-step.ucsd.edu/, Aug. 1995, 7 pages.\*

*Primary Examiner*—Patrice Winder

(74) *Attorney, Agent, or Firm*—Townsend and Townsend and Crew LLP

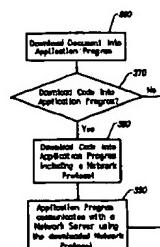
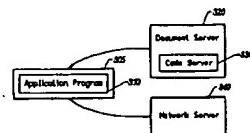
(57)

**ABSTRACT**

A method for enabling an application program to communicate with a network server, includes the steps of downloading a document from a document server to the application program, downloading code from a code server associated with the document server to the application program, the code including a network protocol handler for the network server, and using the network protocol handler to communicate with the network server.

**60 Claims, 11 Drawing Sheets**

Microfiche Appendix Included  
(1 Microfiche, 46 Pages)



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L6: Entry 4 of 10

File: USPT

Feb 17, 2004

DOCUMENT-IDENTIFIER: US 6694371 B1

TITLE: Communication interface device and method

Detailed Description Text (12):

In operation, when the personal computer 3 is connected with the WWW server 4 via the telecommunication line 20 and demands the document for concentrated monitoring in which the location of each JAVA applet to be arranged on a screen of display is described, the WWW server 4 transmits the document to the personal computer 3.

Current US Original Classification (1):

709/230

Current US Cross Reference Classification (1):

709/203

Current US Cross Reference Classification (2):

709/238

Current US Cross Reference Classification (3):

709/239

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US006694371B1

(12) United States Patent  
Sanai(10) Patent No.: US 6,694,371 B1  
(45) Date of Patent: Feb. 17, 2004

## (54) COMMUNICATION INTERFACE DEVICE AND METHOD

6,098,108 A \* 8/2000 Sridhar et al. .... 709/239  
6,115,040 A \* 9/2000 Bladow et al. .... 345/335  
6,243,838 B1 \* 6/2001 Liu et al. .... 714/57  
6,335,928 B1 \* 1/2002 Herrmann et al. .... 370/352

(75) Inventor: Daiji Sanai, Tokyo (JP)

(73) Assignee: Yamatake Corporation, Tokyo (JP)

( \*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/144,520

(22) Filed: Aug. 31, 1998

## (30) Foreign Application Priority Data

Sep. 1, 1997 (JP) ..... 9-236037

(51) Int. Cl.<sup>7</sup> ..... G06F 15/16(52) U.S. Cl. ..... 709/230; 709/203; 709/238;  
709/239(58) Field of Search ..... 709/200.6, 239,  
709/203, 238, 303, 230; 707/501, 513;  
714/57; 370/552, 355; 715/501.1, 513

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5,732,213 A \* 3/1998 Gessel et al. .... 709/224

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6,025,931 A \* 2/2000 Bloomfield .... 358/402

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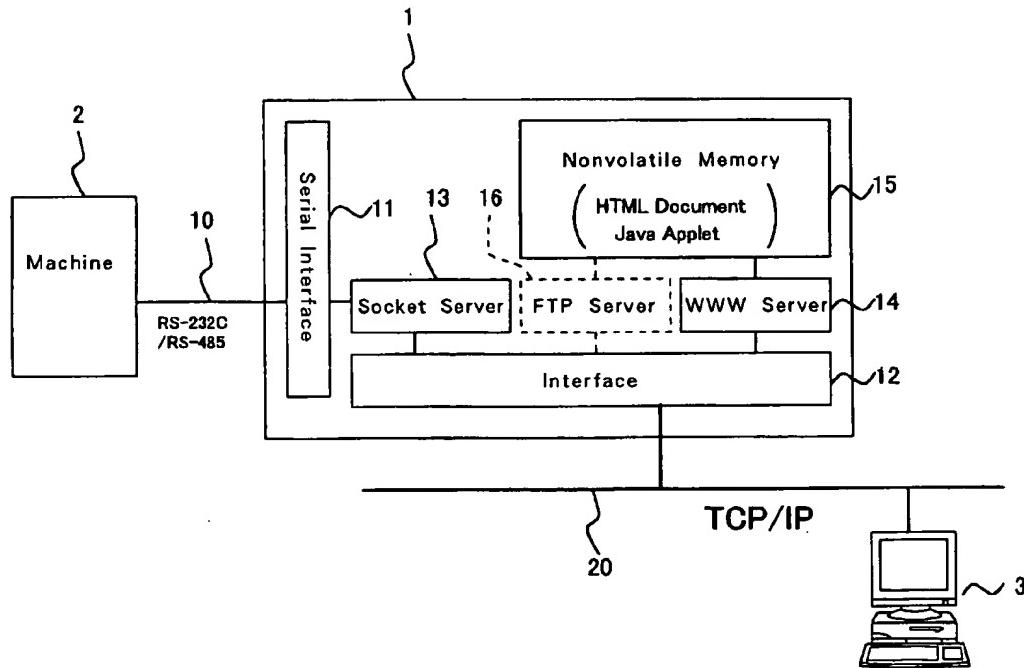
Primary Examiner—Frantz B. Jean

(74) Attorney, Agent, or Firm—Rohm &amp; Monsanto, PLC

## (57) ABSTRACT

A communication interface device connects communication object machines to communication networks that interconnect the communication object machines and management devices that operate or monitor the communication object machines. The communication interface device includes a socket server for converting signals between the communication object machines and the communication networks. A WWW server is connected to the communication networks, and a memory is connected to the WWW server. The memory stores application programs to be transferred to the management devices via the communication networks according to client programs stored in the management devices for execution on the client programs.

13 Claims, 6 Drawing Sheets



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L6: Entry 5 of 10

File: USPT

Nov 5, 2002

DOCUMENT-IDENTIFIER: US 6477575 B1

\*\* See image for Certificate of Correction \*\*

TITLE: System and method for performing dynamic Web marketing and advertising

Brief Summary Text (11):

In some instances, the HTML document may contain data from more than one server. For example, remote text and images may be retrieved from remote servers and integrated into a Web document by a client system. One server may provide an image file, while another server may provide text information to the client system over a network such as the Internet. Different techniques are available to display these types of composite Web documents. For example, a program called a servlet executing on one of the servers may combine data from the various servers referenced in a selected Web document and transmit the composite Web document to the client. In other configurations, the client may utilize a program called an applet, which may be transmitted to the client from one of the servers, to access the multiple servers offering parts of the composite and to build the composite Web document.

Current US Original Classification (1):

709/224

Current US Cross Reference Classification (3):

709/206

Current US Cross Reference Classification (4):

709/246

Current US Cross Reference Classification (5):

709/248

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US006477575B1

(12) **United States Patent**  
Koeppel et al.

(10) **Patent No.:** US 6,477,575 B1  
(45) **Date of Patent:** Nov. 5, 2002

(54) **SYSTEM AND METHOD FOR PERFORMING DYNAMIC WEB MARKETING AND ADVERTISING**

6,038,598 A \* 3/2000 Danneels ..... 709/219  
6,226,656 B1 \* 5/2001 Zawadzki et al. ..... 707/506  
6,286,043 B1 9/2001 Cuomo et al. ..... 709/223

(75) Inventors: Arthur Koeppel, Richmond, VA (US); Jonathan Turner, Richmond, VA (US)

\* cited by examiner

(73) Assignee: Capital One Financial Corporation, Glen Allen, VA (US)

*Primary Examiner*—Ario Etienne

(74) *Attorney, Agent, or Firm*—Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1 days.

(57) **ABSTRACT**

(21) Appl. No.: 09/660,496

Methods and apparatuses for performing dynamic Web-based market analysis are disclosed. A Web server presents a Web page including content to a plurality of users, via browser applications located at each user's client site. While each user views the site, detailed activities by each user are collected in a client side data store located in each client site. After a completion event occurs at each client site, such as a respective client side data store fills up, the collected activity data is sent back to the Web server, where it is stored in a server side data store. An analytical program executed by the Web server retrieves the collected response data from the server side data store and performs market analysis. The analytical program produces results that reflect the success of the content presented in the Web page, and these results are used by a middleware program executed on the Web server to update the content presented in the Web page on a "real-time" and automatic basis.

(22) Filed: Sep. 12, 2000

88 Claims, 15 Drawing Sheets

(51) Int. Cl.<sup>7</sup> ..... G06F 15/173

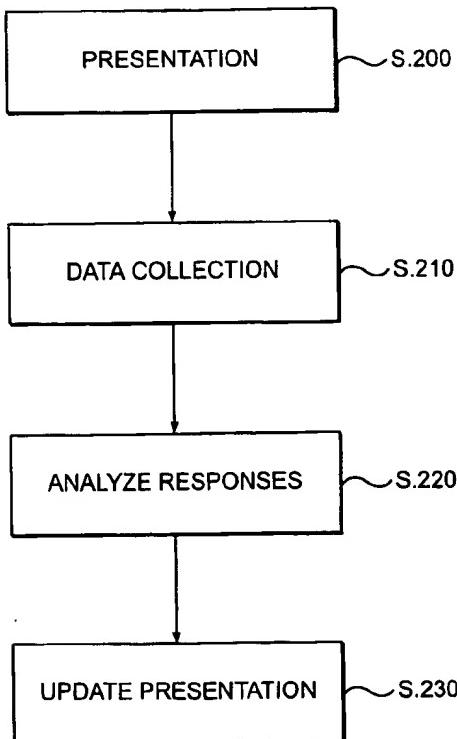
(52) U.S. Cl. ..... 709/224; 709/206; 709/246;  
709/248; 705/14; 705/26

(58) Field of Search ..... 709/224, 218,  
709/219, 201–206, 223, 229, 231, 248,  
249, 238, 245, 246; 705/10, 14, 26, 27

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L6: Entry 6 of 10

File: USPT

Oct 29, 2002

DOCUMENT-IDENTIFIER: US 6473800 B1

\*\* See image for Certificate of Correction \*\*

TITLE: Declarative permission requests in a computer system

Brief Summary Text (8):

In addition to data and metadata (data about data), HTML documents can contain embedded software components containing program code that perform a wide variety of operations on the host computer to which the document is downloaded. These software components expand the interactive ability of an HTML document and can perform other operations, such as manipulating data and playing audio or video clips. ActiveX is a specification developed by Microsoft Corporation for creating software components that can be embedded into an HTML document. Java is a well-known programming language that can be used to develop small computer applications called "applets" and standalone software components called "classes" which are transmitted with HTML documents when they are downloaded from Web servers to client computers. JavaScript and VBScript are scripting languages that are also used to extend the capabilities of HTML. JavaScript and VBScript scripts are embedded in HTML documents. A browser executes each script as it reaches the position in the script during interpretation of the HTML document.

Current US Original Classification (1):

709/226

Current US Cross Reference Classification (1):

709/224

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US006473800B1

**(12) United States Patent**  
**Jerger et al.**

**(10) Patent No.:** US 6,473,800 B1  
**(45) Date of Patent:** Oct. 29, 2002

**(54) DECLARATIVE PERMISSION REQUESTS IN A COMPUTER SYSTEM**

**(75) Inventors:** Michael S. Jerger, Kirkland; Jeffrey A. Bisset, Issaquah; Craig T. Sinclair, Redmond; Michael J. Toutonghi, Seattle, all of WA (US)

**(73) Assignee:** Microsoft Corporation, Redmond, WA (US)

**(\*) Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

**(21) Appl. No.:** 09/116,551

**(22) Filed:** Jul. 15, 1998

**(51) Int. Cl.<sup>7</sup>** G06F 17/30

**(52) U.S. Cl.** 709/226; 709/224; 713/201

**(58) Field of Search** 709/217, 224, 709/229, 221, 245, 232; 713/201; 707/9

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**Primary Examiner—Ayaz Sheikh**

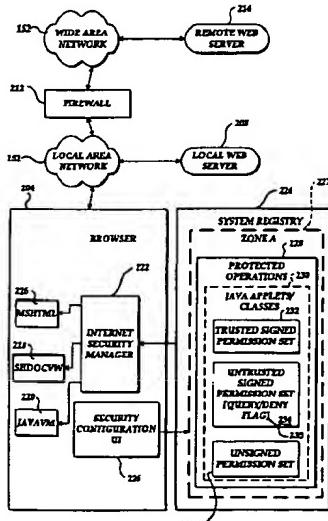
**Assistant Examiner—Khanh Quang Dink**

**(74) Attorney, Agent, or Firm—Christensen O'Connor Johnson Kindness PLLC**

**(57) ABSTRACT**

Computer-based systems and methods are disclosed for a comprehensive security model for managing active content downloaded from a computer network. The security model includes the configuration of a system security policy that is stored on a host computer. The system security policy is configured by security zone in progressively "finer grain" levels with each level associated with and defining the previous level. These levels may include: protected operations; user permission sets, permissions, parameters and primitives. In the disclosed method and systems, a publisher of active content specifies a requested permission set that includes a list the permissions (defined by parameters, which are defined by primitives) that the active content requires in order to run on the host system. The requested permission set is external to the active content so that it is not necessary to run the active content in order to discover the permissions that the active content requires in order to run. The requested permission set may be included in a signed code package wherein the identity of the active content publisher is guaranteed. A digital signature of the signed code package also guarantees that the contents of the signed code package, including active content, support files, and the requested permission set have not been altered or otherwise corrupted since the signed code package was published. The requested permission set may also be included in a catalog file that can be downloaded separately from the active content.

**65 Claims, 82 Drawing Sheets**



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L6: Entry 7 of 10

File: USPT

Apr 2, 2002

DOCUMENT-IDENTIFIER: US 6366912 B1

\*\* See image for Certificate of Correction \*\*

TITLE: Network security zones

Brief Summary Text (8):

In addition to data and metadata, HTML documents can contain embedded software components containing program code that perform a wide variety of operations. These software components expand the interactive ability of an HTML document's user interface. The components can perform other operations, such as manipulating data and playing audio or video clips. ActiveX is a specification developed by Microsoft Corporation for creating software components that can be embedded into an HTML document. Java is a well-known programming language that can be used to develop components called "applets," which are transmitted with HTML documents from Web servers to client computers. JavaScript and VBScript are scripting languages that are also used to extend the capabilities of HTML. JavaScript and VBScript scripts are embedded in HTML documents. A browser executes each script as it reaches the position in the script during interpretation of the HTML document.

Current US Cross Reference Classification (1):

709/219

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US006366912B1

(12) **United States Patent**  
**Wallent et al.**

(10) **Patent No.:** US 6,366,912 B1  
(b5) **Date of Patent:** Apr. 2, 2002

(54) **NETWORK SECURITY ZONES**

(75) **Inventors:** Michael J. Wallent, Redmond; Rajeev Dujari, Kirkland; Anand Ramakrishna, Redmond; Loren M. Kohnfelder, Bellevue, all of WA (US); Lewis Geer, Bethesda, MD (US)

(73) **Assignee:** Microsoft Corporation, Redmond, WA (US)

(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** 09/055,772

(22) **Filed:** Apr. 6, 1998

(51) **Int. Cl.<sup>7</sup>** G06F 17/30

(52) **U.S. Cl.** 707/9; 707/513; 709/219; 713/200

(58) **Field of Search** 713/201, 200, 713/202; 707/9, 501, 513; 709/229, 217-21; 380/25, 24, 23

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Primary Examiner—Hosain T. Alam

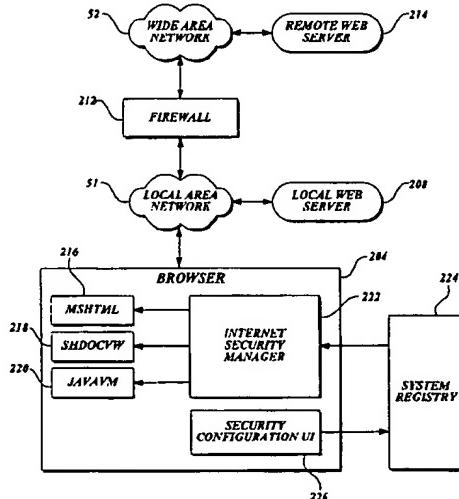
Assistant Examiner—Jean Bolte Fleurantin

(74) **Attorney, Agent, or Firm:** Christensen O'Connor Johnson Kindness PLLC

(57) **ABSTRACT**

A computer based system and method of providing security when receiving digital data at a client computer from one or more Web sites is disclosed. The method includes receiving security configuration information that specifies multiple security zones, each zone corresponding to a set of Web sites. The security configuration information also includes information specifying a set of security settings corresponding to each security zone. A security setting is a specification indicating an action to perform when a Web page from one of the security zones requests a protected operation to be performed. During a Web browsing session, the mechanism of the invention determines the security zone corresponding to the Web site currently being browsed. Prior to performing the protected operation, the mechanism of the invention determines the action to perform, based on the current Web site's security zone, the requested operation, and the security setting corresponding to the requested operation and the Web site's zone. Depending upon the security setting, the Web browser may perform the requested operation, prevent the requested operation from being performed, or prompt the user of whether to perform the requested operation. During the browsing of a Web site, the Web browser visually indicates the security zone corresponding to the current Web site.

19 Claims, 9 Drawing Sheets



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L6: Entry 8 of 10

File: USPT

May 1, 2001

DOCUMENT-IDENTIFIER: US 6225993 B1

TITLE: Video on demand applet method and apparatus for inclusion of motion video in multimedia documents

Brief Summary Text (17):

By using an applet of a multimedia document viewer to request and control receipt by a decoder of a motion video bit stream and to control decoding of the motion video bit stream by the decoder, a designer of a multimedia document can easily and conveniently include motion video images in multimedia documents. In addition, since the applet transmits bit stream control signals to a video server, the motion video signals which can be incorporated into a multimedia document are any such motion video signals stored in such a video server. Such video servers will likely include a large number and wide variety of motion video signals, thereby providing a wealth of motion video content for inclusion in multimedia documents.

Current US Cross Reference Classification (1):

709/219

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US006225993B1

(12) **United States Patent**  
Lindblad et al.

(10) Patent No.: US 6,225,993 B1  
(45) Date of Patent: \*May 1, 2001

(54) **VIDEO ON DEMAND APPLET METHOD AND APPARATUS FOR INCLUSION OF MOTION VIDEO IN MULTIMEDIA DOCUMENTS**

(75) Inventors: Christopher Lindblad, Stanford, CA (US); Stephan E. Cachat, Taninges (FR)

(73) Assignee: Sun Microsystems, Inc., Palo Alto, CA (US)

(\*) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 08/636,118

(22) Filed: Apr. 22, 1996

(51) Int. Cl.<sup>7</sup> H04N 7/173

(52) U.S. Cl. 345/327; 709/219; 348/7; 348/10

(58) Field of Search 370/352, 389, 370/485-487; 345/327, 302, 328, 525, 526; 348/6, 7, 10, 12; 455/3.1, 4.1, 4.2, 5.1; 395/200.32, 200.33, 200.47-200.49, 200.61; 709/217, 218, 219, 216

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(List continued on next page.)

Primary Examiner—Chris Grant

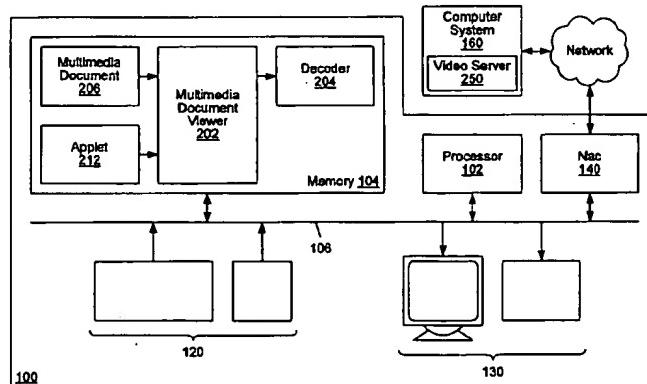
(74) Attorney, Agent, or Firm—Conley, Rose & Tayon; B. Noel Kivlin

(57) ABSTRACT

A computer process which requests streams of motion video titles and decodes and displays the motion video signals of the stream for display in a computer display device is constructed in the form of an applet of a multimedia document viewer such as a World Wide Web browser. Accordingly, a designer of multimedia documents such as HTML pages can easily incorporate motion video titles into such HTML pages by specifying a few parameters of a desired title or a desired portion of a title to be requested from a video server. The applet builds bit stream control signals from the specification of the title or the portion of the title. The bit stream control signals request transmission of the title or the portion of the title from a bit stream server such as a video server and are in a form appropriate for processing by the bit stream server. The applet transmits the bit stream control signals to the bit stream server to thereby request that the bit stream server initiate transmission of a bit stream representing the requested title or the requested portion of the title. The applet also builds decoder control signals from the specification of the title or the portion of the title. The decoder control signals direct a bit stream decoder to receive the requested bit stream from the bit stream server and to decode a motion video signal from the bit stream. The applet transmits the decoder control signals to the decoder to cause the decoder to receive the bit stream and to decode the motion video signal from the bit stream.

45 Claims, 3 Drawing Sheets

Microfiche Appendix Included  
(1 Microfiche, 98 Pages)



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L6: Entry 9 of 10

File: USPT

May 30, 2000

DOCUMENT-IDENTIFIER: US 6070185 A

TITLE: Technique for obtaining information and services over a communication network

Detailed Description Text (15):

At step 425, manager processor 107 informs HTTP server 109 of the successful assignment of a CSA to provide the customer service, and the address of controller 111 for use by a surrogate to be created in browser 151. Similar to surrogate 173, this surrogate, which is further described hereinbelow, serves as an assistant to browser 151 to carry out collaborative browsing of HTML documents in obtaining customer service. Server 109 then retrieves information concerning a user login web page from host computer 115, generates an HTML document representing the web page, and updates the customer cookie. The updated customer cookie differs from the previous version in that the value of bit 205 is now "1", reflecting the fact that the user has been referred to a CSA. Server 109 transmits to browser 151, the controller address, HTML document, and updated customer cookie, along with predetermined mobile code in the form of a JAVA applet.

Current US Original Classification (1):

709/204

Current US Cross Reference Classification (1):

709/202

Current US Cross Reference Classification (2):

709/203

Current US Cross Reference Classification (3):

709/205

Current US Cross Reference Classification (4):

709/206

Current US Cross Reference Classification (5):

709/217

Current US Cross Reference Classification (6):

709/219

Current US Cross Reference Classification (7):

709/227

Current US Cross Reference Classification (8):

709/228

Current US Cross Reference Classification (9):

709/230

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US006070185A

**United States Patent [19]**

Anupam et al.

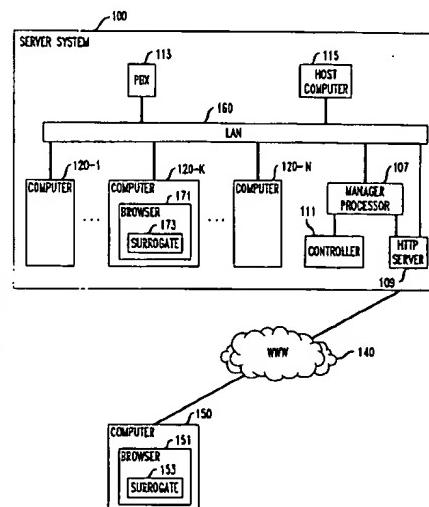
[11] Patent Number: **6,070,185**[45] Date of Patent: **May 30, 2000****[54] TECHNIQUE FOR OBTAINING INFORMATION AND SERVICES OVER A COMMUNICATION NETWORK****[75] Inventors:** Vinod Anupam, Scotch Plains; Narain H. Gehani, Summit, both of N.J.**[73] Assignee:** Lucent Technologies Inc., Murray Hill, N.J.**[21] Appl. No.:** 08/850,532**[22] Filed:** May 2, 1997**[51] Int. Cl.<sup>7</sup>** G06F 13/38; G06F 15/17**[52] U.S. Cl.** 709/204; 709/202; 709/203; 709/205; 709/206; 709/217; 709/219; 709/227; 709/228; 709/230; 707/501; 707/514; 345/330; 345/331; 345/332; 345/335**[58] Field of Search** 709/204, 202, 709/203, 217, 219, 227, 228, 230, 205, 206; 345/335, 330, 331, 332; 707/514, 501**[56] References Cited****U.S. PATENT DOCUMENTS**

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In a communications arrangement, a computer user accesses a server system to seek customer service over the World Wide Web (WWW). The server system assigns a customer service agent (CSA) to communicate with the user to realize the customer service. In a customer service session, the user and CSA may collaboratively browse hypertext markup language (HTML) documents at different uniform resource locators (URLs) to obtain relevant information. However, in accordance with the invention, the version of each document presented to the user may be different from that presented to the CSA. In particular, the CSA version contains proprietary information which is excluded from the user version.

**63 Claims, 3 Drawing Sheets**

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L6: Entry 10 of 10

File: USPT

Dec 28, 1999

DOCUMENT-IDENTIFIER: US 6009464 A

TITLE: Method and apparatus for enabling application programs to communicate with network clients and servers

Detailed Description Text (34):

When the user wishes to place an order for the item, the user selects button 590. The application program transmits the user's selection of button 590 to the document server, and in response, the document server has an associated code server download Java Language applets to the application program. After the applets have been downloaded, the application program executes the applets. These applets contain object stubs, ORB specific code including the particular network protocol of the on-line ordering system, a network name of the on-line ordering system, etc. The application program then connects to the on-line ordering system, and upon connection therewith, invokes an object within the on-line ordering system. Typically the on-line ordering system returns an acknowledgement signal which is passed back to the application program.

Detailed Description Text (58):

When the user wishes to place an order for a stock at a certain price, the user selects button 1340. The server application transmits the users selection of button 1340 to the document server, and in response, the document server has an associated code server download Java language applets to the application program. After the applets have been downloaded, the application program executes the applets. These applets contain object skeletons, ORB specific code including the particular network protocol of the brokerage trading system, etc. In response to a trade command, for example, the application program creates an "trade" object. The user may then exit the web browser. Later, when the trade has executed, the brokerage trading system calls up the user's machine and invokes a method on the "trade" object in the application program to notify the user that the trade is complete.

Current US Original Classification (1):

709/219

Current US Cross Reference Classification (1):

709/230

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US006009464A

# United States Patent [19]

Hamilton et al.

[11] Patent Number: 6,009,464

[45] Date of Patent: \*Dec. 28, 1999

- [54] **METHOD AND APPARATUS FOR ENABLING APPLICATION PROGRAMS TO COMMUNICATE WITH NETWORK CLIENTS AND SERVERS**

[75] Inventors: **Graham Hamilton; Peter B. Kessler, both of Palo Alto; Jeffrey Donald Nisewanger, San Jose; Sami Shalo, San Francisco; Jacob Y. Levy; Steven Robert Kleiman, both of Los Altos, all of Calif.**

[73] Assignee: **Sun Microsystems, Inc., Mountain View, Calif.**

[ \* ] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

[21] Appl. No.: 08/543,674

[22] Filed: Oct. 16, 1995

#### **Related U.S. Application Data**

- [60] Provisional application No. 60/004,057, Sep. 20, 1995.

[51] Int. Cl.<sup>6</sup> ..... G06F 13/00

[52] U.S. Cl. ..... 709/219; 709/230

[58] Field of Search ..... 395/200.02, 683  
395/680, 712, 200.06, 200.03, 200.09, 200.33  
200.57, 200.6, 684, 200.47, 200.48, 200.49  
701; 709/304, 203, 217, 218, 219, 300  
205, 230

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*Primary Examiner*—Zarni Maung

*Assistant Examiner*—Patrice L. Winder

*Attorney, Agent, or Firm*—Townsend and Townsend and Crew LLP

## ABSTRACT

A method for enabling an application program to communicate with a network server, includes the steps of downloading a document from a document server to the application program, downloading code from a code server associated with the document server to the application program, the code including a network protocol handler for the network server, and using the network protocol handler to communicate with the network server.

70 Claims, 11 Drawing Sheets

**Microfiche Appendix Included  
(1 Microfiche, 46 Pages)**

